MFG 264 : AUTOMATED CUTTING

Transcript title

Automated Cutting

Credits

3

Grading mode

Standard letter grades

Total contact hours

60

Other hours

60

Prerequisites

MFG 119 or MFG 119M.

Course Description

Utilize CAD tools to lay out and generate code for efficiently cutting material using a CNC plasma table or other 2D CNC tool. Includes design, tool set-up, tool maintenance, code editing, and safe operation of tools to create a final product.

Course learning outcomes

1. Identify all major safety precautions associated with the CNC plasma table, cutting gas, control voltage, amperage and automated circuits.
2. Design parts from drawing specification to generate and edit CNC code for 2D automated cutting using appropriate CAD software.
3. Demonstrate appropriate set up, maintenance, and use of CNC plasma table for cutting mild steel.
4. Produce multiple parts using CNC plasma table, or other 2D automated cutting table, to original drawing specification.

Content outline

Designing parts from product drawings or requests Generating CNC (G-code) for machine control Understanding and editing G-code Plasma table safety (and other 2D automated systems) Operation and maintenance of plasma table Determining correct plasma table settings Practical Exercises

Required materials

This class requires the purchase of safety equipment, reference books, measurement equipment, and tools.